

Patented  
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CLAIMS

1. A hermetic compressor having a sealed housing storing therein lubricating oil and receiving therein a motor element and a  
5 compression element driven by said motor element, said compression element comprising a shaft having an eccentric shaft portion, and an auxiliary shaft portion and a main shaft portion coaxially provided on upper and lower sides of said  
10 eccentric shaft portion so as to sandwich it therebetween, a cylinder block provided with a compression chamber of a substantially cylindrical shape, a main bearing fixed to or formed integral with said cylinder block so as to be substantially  
15 perpendicular to an axis of said compression chamber and supporting an upper half portion of said main shaft portion of said shaft, an auxiliary bearing fixed to or formed integral with said cylinder block and supporting said auxiliary  
20 shaft portion, a piston that performs reciprocating motion in said compression chamber, and connecting means for coupling said piston and said eccentric shaft together, wherein said shaft is provided with an oil feed mechanism having a  
25 lower end communicating with said lubricating oil and an upper end penetratingly open to an upper

end portion of said auxiliary shaft portion, and  
at least one of said auxiliary bearing and said  
cylinder block is provided with an oil feed  
passage for conducting the lubricating oil  
5 discharged from the upper end of said oil feed  
mechanism, to a sliding surface of said piston.

2. A hermetic compressor according to claim 1,  
wherein an oil pool for storing said lubricating  
10 oil is concavely formed in said oil feed passage  
on an upper surface of said auxiliary bearing.

3. A hermetic compressor according to claim 1,  
wherein an oil dispersion hole communicating with  
15 said oil feed mechanism is formed in a  
substantially horizontal direction at a portion of  
said auxiliary shaft portion above an upper  
surface of said auxiliary bearing.

20 4. A hermetic compressor according to claim 1,  
wherein an oil fence projecting upward is provided  
on an upper surface of said auxiliary bearing in  
the vicinity of said oil feed passage.

25 5. A hermetic compressor according to claim 1,  
wherein an opening portion is provided, said

passage.

9. A hermetic compressor according to claim 1,  
wherein a substantially annular oil feed groove  
5 communicating with said oil feed passage in the  
vicinity of a bottom dead center of said piston is  
concavely formed on an outer periphery of said  
piston.

10 10. A hermetic compressor according to claim 1,  
wherein an oil bath communicating with sliding  
surfaces between said auxiliary shaft portion and  
said auxiliary bearing is formed around said  
auxiliary shaft portion.

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11. A hermetic compressor according to claim 10,  
wherein an oil feed hole is formed on said  
auxiliary shaft portion, said oil feed hole  
establishing communication between said oil bath  
20 and said oil feed mechanism and having a bottom  
surface located above a bottom surface of said oil  
bath.

12. A hermetic compressor according to claim 1,  
25 wherein a portion of said oil feed passage is  
formed in said auxiliary bearing, and an oil feed

hole establishing communication between said oil feed passage and said oil feed mechanism at least once during one rotation of said shaft is formed in said auxiliary shaft portion.

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13. A hermetic compressor according to claim 1, wherein an oil fence projecting upward is provided on a surface of said cylinder block above the compression chamber, and said oil feed passage is  
10 formed in the surface of said cylinder block above said compression chamber.

14. A hermetic compressor according to claim 1, which is inverter-driven at a plurality of  
15 operating frequencies including at least an operating frequency lower than a power supply frequency.

15. A hermetic compressor according to claim 14,  
20 wherein said operating frequency lower than said power supply frequency includes at least an operating frequency lower than 30Hz.